

0590  
090

O/P E

CRF Errors Corrected by the STIC Systems Branch

CRF Processing Date: 10/15/2001  
Edited by: [Signature]  
Verified by: [Signature] (STIC sta)

Serial Number: 09/934,900

ENTERED

#2

- ☐ Changed a file from non-ASCII to ASCII
- ☐ Changed the margins in cases where the sequence was "wrapped" down to the next line.
- ☐ Edited a format error in the Current Application Data section, specifically: \_\_\_\_\_
- ☐ Edited the Current Application Data section with the actual current number. The number inputted by the applicant was ☐ the prior application data; or ☐ other \_\_\_\_\_
- ☐ Added the mandatory heading and subheadings for "Current Application Data".
- ☐ Edited the "Number of Sequences" field. The applicant spelled out a number instead of using an integer.
- ☐ Changed the spelling of a mandatory field (the headings or subheadings), specifically: \_\_\_\_\_
- ☐ Corrected the SEQ ID NO when obviously incorrect. The sequence numbers that were edited were: \_\_\_\_\_
- ☐ Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited: \_\_\_\_\_
- ☐ Corrected subheading placement. All responses must be on the same line as each subheading. If the applicant placed a response below the subheading, this was moved to its appropriate place.
- ☐ Inserted colons after headings/subheadings. Headings edited included: \_\_\_\_\_
- ☐ Deleted extra, invalid, headings used by an applicant, specifically: \_\_\_\_\_
- ☒ Deleted: ☒ non-ASCII "garbage" at the beginning/end of files; ☐ secretary initials/lienamo at end of file;  
☐ page numbers throughout text; ☐ other invalid text, such as \_\_\_\_\_
- ☐ Inserted mandatory headings, specifically: \_\_\_\_\_
- ☐ Corrected an obvious error in the response, specifically: \_\_\_\_\_
- ☐ Edited identifiers where upper case is used but lower case is required, or vice versa.
- ☐ Corrected an error in the Number of Sequences field, specifically: \_\_\_\_\_
- ☐ A "Hard Page Break" code was inserted by the applicant. All occurrences had to be deleted.
- ☐ Deleted ending stop codon in amino acid sequences and adjusted the "(A)Length:" field accordingly (error due to a PatentIn bug). Sequences corrected: \_\_\_\_\_
- ☐ Other: \_\_\_\_\_

Examiner: The above corrections must be communicated to the applicant in the first Office Action. DO NOT send a copy of this form. 3/1/95

## RAW SEQUENCE LISTING

DATE: 10/15/2001

PATENT APPLICATION: US/09/934,900

TIME: 21:05:11

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF3\10152001\I934900.raw

3 <110> APPLICANT: Booth, Russ  
4 Cahoon, Rebecca E  
5 Hitz, William D  
6 Kinney, Anthony  
7 Yadav, Naren  
9 <120> TITLE OF INVENTION: Nucleotide Sequences of a New Class of Diverged Delta-9 Stearoyl-  
10 ACP Desaturase  
12 <130> FILE REFERENCE: BB1476 US NA  
C--> 14 <140> CURRENT APPLICATION NUMBER: US/09/934,900  
C--> 15 <141> CURRENT FILING DATE: 2001-08-22  
17 <150> PRIOR APPLICATION NUMBER: 60/226996  
18 <151> PRIOR FILING DATE: 2000-08-22  
20 <160> NUMBER OF SEQ ID NOS: 26  
22 <170> SOFTWARE: Microsoft Office 97  
24 <210> SEQ ID NO: 1  
25 <211> LENGTH: 1560  
26 <212> TYPE: DNA  
27 <213> ORGANISM: Glycine max  
29 <400> SEQUENCE: 1  
30 gagggcgttg atctggcact cgttttgctg tggctgctct ctgaaactga aagcgaagca 60  
31 gcagccactg aaaagcagaa aacaaaggga aagaacaagc ttagccatgc tgagtattat 120  
32 attcaaggaa ttcgtaagt acaatagaca cgttaacaaa accatgcaga tacgaacctg 180  
33 ccaactccatc accacccaaa cccttccaca acttccgtgt tcttctagaa aagcccggaa 240  
34 ccgccacctt cttccgccgt taaacgctgc ggtttccgcg gcgccgttca aagcccggaa 300  
35 ggcccactca atgctccag aaaagaaaga aattttcaag tccttgagg gatgggcctc 360  
36 ggagtgggtc ctaccgctgc tgaagcccggt ggagcaatgc tggcagccac aaaacttcct 420  
37 ccctgacccc tccctccgc atgaagagtt cagccatcag gtgaaggagc ttgcggaacg 480  
38 cactaaagag ttacctgatg agtactttgt ggtgctggtg ggtgatattg tcaccgagga 540  
39 cgcgcttccc acttaccaga ccatgatcaa caaccttgat ggagtgaag atgacagcgg 600  
40 cagcagccc agcccggtgg ccgtgtggac ccgggcctgg accgcccagg aaaacagaca 660  
41 cggggatctg ctcaagaactt atttgtatct ctctgggagg gttgacatgg ctaaggctga 720  
42 aaagaccgta cattacctca ttacagctgg catggaccct gggacagaca acaaccata 780  
43 tttggggttt gtgtacacgt cattccaaga gcgagcaaca tttgtggcgc acgggaacac 840  
44 ggctcggctc gcgaaggagg gcggggatcc agtgctggcg cgcctatgcg ggaccatcgc 900  
45 agcggacgag aagcggcacg agaacgcgta ctcaagaatc gtggagaagc ttctggaagt 960  
46 ggacccacc ggggcaatgg tggccatagg gaacatgatg gagaagaaga tcacgatgcc 1020  
47 ggcgacatt atgtacgatg gggatgacct caggctattc gagcactact ccgctgtggc 1080  
48 gcagcgata ggcggtgata ccgccaacga ctacgcagac atcttgaggt ttctcgttga 1140  
49 acggtggaga ttggagaagc ttgaaggatt gatggctgag ggggaagcgg cgagagattt 1200  
50 cgtgtgtggg ttggcgccga ggattaggag gttgcaagaa cgcgctgatg agcagcgcg 1260  
51 taagatgaag aagcatcatg gcgttaagtt cagttggatt ttcaataaag aattgctttt 1320  
52 gtgaaatttc agttaagact taagagataa gagatagagg tcaacgtgag tcaacagggt 1380  
53 tttggctttg tgactatttt gagtttttgt ttgtagggtg catttttagt acgaataatg 1440  
54 aacaatttaa catggattgc gtgtaattga cattgttggg tccatggttg ttgttctggt 1500  
55 ggatacacia ccagtaggac ttttttgttg taacgttttg cttgcatatt agcttagctt 1560  
58 <210> SEQ ID NO: 2  
59 <211> LENGTH: 405

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/934,900

DATE: 10/15/2001

TIME: 21:05:11

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF3\10152001\I934900.raw

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60 <212> TYPE: PRT
61 <213> ORGANISM: Glycine max
63 <400> SEQUENCE: 2
64 Met Leu Ser Ile Ile Phe Lys Glu Phe Val Lys Tyr Asn Arg His Val
65   1           5           10           15
67 Ile Lys Thr Met Gln Ile Arg Thr Cys His Ser Ile Thr Thr Gln Thr
68           20           25           30
70 Leu Pro Gln Leu Pro Cys Ser Ser Arg Lys Ala His His Arg His Leu
71           35           40           45
73 Leu Pro Pro Leu Asn Ala Ala Val Ser Ala Ala Pro Phe Lys Ala Arg
74           50           55           60
76 Lys Ala His Ser Met Pro Pro Glu Lys Lys Glu Ile Phe Lys Ser Leu
77   65           70           75           80
79 Glu Gly Trp Ala Ser Glu Trp Val Leu Pro Leu Leu Lys Pro Val Glu
80           85           90           95
82 Gln Cys Trp Gln Pro Gln Asn Phe Leu Pro Asp Pro Ser Leu Pro His
83           100          105          110
85 Glu Glu Phe Ser His Gln Val Lys Glu Leu Arg Glu Arg Thr Lys Glu
86           115          120          125
88 Leu Pro Asp Glu Tyr Phe Val Val Leu Val Gly Asp Met Val Thr Glu
89           130          135          140
91 Asp Ala Leu Pro Thr Tyr Gln Thr Met Ile Asn Asn Leu Asp Gly Val
92 145           150          155          160
94 Lys Asp Asp Ser Gly Thr Ser Pro Ser Pro Trp Ala Val Trp Thr Arg
95           165          170          175
97 Ala Trp Thr Ala Glu Glu Asn Arg His Gly Asp Leu Leu Arg Thr Tyr
98           180          185          190
100 Leu Tyr Leu Ser Gly Arg Val Asp Met ala Lys Val Glu Lys Thr Val
101           195          200          205
103 His Tyr Leu Ile Ser Ala Gly Met Asp Pro Gly Thr Asp Asn Asn Pro
104           210          215          220
106 Tyr Leu Gly Phe Val Tyr Thr Ser Phe Gln Glu Arg Ala Thr Phe Val
107 225           230          235          240
109 Ala His Gly Asn Thr Ala Arg Leu Ala Lys Glu Gly Gly Asp Pro Val
110           245          250          255
112 Leu Ala Arg Leu Cys Gly Thr Ile Ala Ala Asp Glu Lys Arg His Glu
113           260          265          270
115 Asn Ala Tyr Ser Arg Ile Val Glu Lys Leu Leu Glu Val Asp Pro Thr
116           275          280          285
118 Gly Ala Met Val Ala Ile Gly Asn Met Met Glu Lys Lys Ile Thr Met
119           290          295          300
121 Pro Ala His Leu Met Tyr Asp Gly Asp Asp Pro Arg Leu Phe Glu His
122 305           310          315          320
124 Tyr Ser Ala Val Ala Gln Arg Ile Gly Val Tyr Thr Ala Asn Asp Tyr
125           325          330          335
127 Ala Asp Ile Leu Glu Phe Leu Val Glu Arg Trp Arg Leu Glu Lys Leu
128           340          345          350
130 Glu Gly Leu Met ala Glu Gly Lys Arg Ala Gln Asp Phe Val Cys Gly
131           355          360          365

```

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/934,900

DATE: 10/15/2001

TIME: 21:05:11

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF3\10152001\I934900.raw

133 Leu Ala Pro Arg Ile Arg Arg Leu Gln Glu Arg Ala Asp Glu Arg Ala  
 134 370 375 380  
 136 Arg Lys Met Lys Lys His His Gly Val Lys Phe Ser Trp Ile Phe Asn  
 137 385 390 395 400  
 139 Lys Glu Leu Leu Leu

140 405

143 &lt;210&gt; SEQ ID NO: 3

144 &lt;211&gt; LENGTH: 563

145 &lt;212&gt; TYPE: DNA

146 &lt;213&gt; ORGANISM: Zea mays

148 &lt;220&gt; FEATURE:

149 &lt;221&gt; NAME/KEY: unsure

150 &lt;222&gt; LOCATION: (308)

152 &lt;220&gt; FEATURE:

153 &lt;221&gt; NAME/KEY: unsure

154 &lt;222&gt; LOCATION: (458)

156 &lt;220&gt; FEATURE:

157 &lt;221&gt; NAME/KEY: unsure

158 &lt;222&gt; LOCATION: (483)

160 &lt;220&gt; FEATURE:

161 &lt;221&gt; NAME/KEY: unsure

162 &lt;222&gt; LOCATION: (494)

164 &lt;220&gt; FEATURE:

165 &lt;221&gt; NAME/KEY: unsure

166 &lt;222&gt; LOCATION: (519)

168 &lt;220&gt; FEATURE:

169 &lt;221&gt; NAME/KEY: unsure

170 &lt;222&gt; LOCATION: (521)

172 &lt;220&gt; FEATURE:

173 &lt;221&gt; NAME/KEY: unsure

174 &lt;222&gt; LOCATION: (545)

176 &lt;220&gt; FEATURE:

177 &lt;221&gt; NAME/KEY: unsure

178 &lt;222&gt; LOCATION: (550)

180 &lt;220&gt; FEATURE:

181 &lt;221&gt; NAME/KEY: unsure

182 &lt;222&gt; LOCATION: (557)

184 &lt;400&gt; SEQUENCE: 3

185 agcgacacaaa cccgggcacc tcgtctagct cgccttccat ttcgtccctt cctattcata 60  
 186 ctaccttcta cgagtttgag cagccatggc ggcaacaaca ccactgcttg ctgtggctgg 120  
 187 acatggagta tcctacaaac cagcaaatgc taaagacagc tactactgct tcaaatttgc 180  
 188 atcatcgga agaacaagag tcacctccc acagatcatc cactggaggt gcaggagcag 240  
 189 tcatagcagc acggggacca cgaccatggc cgtccctgtc ctcaagcggc gggagaagca 300  
 W--> 190 ggacgaanag caggaatgga tggggtacct ggccccggag aagctggagg tgctagcaca 360  
 191 cctggagccg tgggcggagg cgcacgtgct gccgctgctg aagcccgcgg aggaggggtgg 420  
 W--> 192 aaccgtcgga catctccgga ccggcgcgct ggcgacangg ctacacaccgt gccgcaactc 480  
 W--> 193 gcncggggg caantgcega cccactgggt gctgggtgga natatacgag gaggctgcca 540  
 W--> 194 gtcanagcgn ccaacgntca ggg 563  
 197 <210> SEQ ID NO: 4

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/934,900

DATE: 10/15/2001

TIME: 21:05:11

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF3\10152001\I934900.raw

```

198 <211> LENGTH: 110
199 <212> TYPE: PRT
200 <213> ORGANISM: Zea mays
202 <220> FEATURE:
203 <221> NAME/KEY: UNSURE
204 <222> LOCATION: (75)
206 <400> SEQUENCE: 4
207 Met ala Ala Thr Thr Pro Leu Leu Ala Val Ala Gly His Gly Val Ser
208   1           5           10           15
210 Tyr Lys Pro Ala Asn Ala Lys Asp Ser Tyr Tyr Cys Phe Lys Phe Ala
211           20           25           30
213 Ser Ser Ala Arg Thr Arg Val Thr Leu Pro Gln Ile Ile His Trp Arg
214           35           40           45
216 Cys Arg Ser Ser His Ser Ser Thr Gly Thr Thr Thr Met ala Val Pro
217           50           55           60
W--> 219 Val Leu Lys Arg Arg Glu Lys Gln Asp Glu Xaa Gln Glu Trp Met Gly
220   65           70           75           80
222 Tyr Leu Ala Pro Glu Lys Leu Glu Val Leu Ala His Leu Glu Pro Trp
223           85           90           95
225 Ala Glu Ala His Val Leu Pro Leu Leu Lys Pro Ala Glu Glu
226           100          105          110
229 <210> SEQ ID NO: 5
230 <211> LENGTH: 880
231 <212> TYPE: DNA
232 <213> ORGANISM: Zea mays
234 <400> SEQUENCE: 5
235 cgtcggcacg agcggcacga gctcgtgccg cgtccactcc acagtcaccc accgcccgcct 60
236 cctccagcgt ccggcccgtg cgccgcgcag ccaacccagc gggcacgatg caggcccacg 120
237 gcatcgccat ccgcgcccgc gggccggtgg cggcgacgca ggcccccgcg cgcgcacggc 180
238 aatgccgcgt gtctgcggcg gcggtcggcg cgcgcgcgcg gcgcgcccgc gtgacgcact 240
239 cgatgccgcc ggagaaggcg gaggtgttcc gctcgttggg gggctggggc gcgcggtcgc 300
240 tgctgccgct gctcaagccc gtggaggagt gctggcagcc ggcggaactc ctcccggact 360
241 cctcgtccga gatgttcggg cacgaggtcc gcgagctgcg cgcgcgcgcg gcggggctcc 420
242 ccgacgagta ctctcgtcgtg ctctgtggcg acatggtcac ggaagaggcg ctgcccacgt 480
243 accagaccat gatcaacacg ctcgacggcg tccgcgacga gaccggcgcc agcaactgcc 540
244 cctggggcgt ctggacgcgc gcctggaccg ccgaggagaa ccgccacggc gacatcctcg 600
245 gcaagtacat gtacctatcc ggccgcgtcg acatgcgcac ggtcgagaag accgtccagt 660
246 acctcatcgg ctccggcatg gatcccggaa cggagaacaa cccgtacctg ggcttcgtgt 720
247 acacgagctt ccaggagcgc gcgacggcgg tctcgcacgg caacaccgcg cggctcccca 780
248 gggcgcacgg ggaagacttc ttggcgcgcg cctgcgggac caaccgcgcg caacaagaaa 840
249 cgaaacaaaa cgggttaagg ggcacctccc aagaagttgg 880
252 <210> SEQ ID NO: 6
253 <211> LENGTH: 257
254 <212> TYPE: PRT
255 <213> ORGANISM: Zea mays
257 <400> SEQUENCE: 6
258 Met Gln Ala His Gly Ile Ala Ile Arg Ala Arg Gly Pro Val Ala Ala
259   1           5           10           15
261 Thr Gln Ala Pro Ala Arg Arg Arg Gln Cys Arg Val Ser Ala Ala Ala

```

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/934,900

DATE: 10/15/2001

TIME: 21:05:11

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF3\10152001\I934900.raw

```

262          20          25          30
264 Val Gly Ala Pro Ala Ala Arg Ala Arg Val Thr His Ser Met Pro Pro
265          35          40          45
267 Glu Lys Ala Glu Val Phe Arg Ser Leu Glu Gly Trp Ala Ala Arg Ser
268          50          55          60
270 Leu Leu Pro Leu Leu Lys Pro Val Glu Glu Cys Trp Gln Pro Ala Asp
271 65          70          75          80
273 Phe Leu Pro Asp Ser Ser Ser Glu Met Phe Gly His Glu Val Arg Glu
274          85          90          95
276 Leu Arg Ala Arg Ala Ala Gly Leu Pro Asp Glu Tyr Phe Val Val Leu
277          100          105          110
279 Val Gly Asp Met Val Thr Glu Glu Ala Leu Pro Thr Tyr Gln Thr Met
280          115          120          125
282 Ile Asn Thr Leu Asp Gly Val Arg Asp Glu Thr Gly Ala Ser Asn Cys
283          130          135          140
285 Pro Trp Ala Val Trp Thr Arg Ala Trp Thr Ala Glu Glu Asn Arg His
286 145          150          155          160
288 Gly Asp Ile Leu Gly Lys Tyr Met Tyr Leu Ser Gly Arg Val Asp Met
289          165          170          175
291 Arg Met Val Glu Lys Thr Val Gln Tyr Leu Ile Gly Ser Gly Met Asp
292          180          185          190
294 Pro Gly Thr Glu Asn Asn Pro Tyr Leu Gly Phe Val Tyr Thr Ser Phe
295          195          200          205
297 Gln Glu Arg Ala Thr Ala Val Ser His Gly Asn Thr Ala Arg Leu Pro
298          210          215          220
300 Arg Ala His Gly Asp Asp Phe Leu Ala Arg Ala Cys Gly Thr Asn Arg
301 225          230          235          240
303 Arg Gln Gln Glu Thr Lys Gln Asn Gly Leu Arg Gly Ile Leu Gln Glu
304          245          250          255
306 Val
307 257
310 <210> SEQ ID NO: 7
311 <211> LENGTH: 463
312 <212> TYPE: DNA
313 <213> ORGANISM: Oryza sativa
315 <220> FEATURE:
316 <221> NAME/KEY: unsure
317 <222> LOCATION: (334)
319 <220> FEATURE:
320 <221> NAME/KEY: unsure
321 <222> LOCATION: (350)
323 <220> FEATURE:
324 <221> NAME/KEY: unsure
325 <222> LOCATION: (358)
327 <220> FEATURE:
328 <221> NAME/KEY: unsure
329 <222> LOCATION: (431)
331 <220> FEATURE:
332 <221> NAME/KEY: unsure

```

Use of n and/or Xaa has been detected in the Sequence Listing.  
 Review the Sequence Listing to insure a corresponding  
 explanation is presented in the <220> to <223> fields of  
 each sequence using n or Xaa.

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/934,900

DATE: 10/15/2001

TIME: 21:05:12

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF3\10152001\I934900.raw

L:14 M:270 C: Current Application Number differs, Replaced Application Number  
 L:15 M:271 C: Current Filing Date differs, Replaced Current Filing Date  
 L:190 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:3  
 L:190 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3  
 L:192 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:3  
 L:192 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3  
 L:193 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:3  
 L:193 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3  
 L:194 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:3  
 L:194 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3  
 L:219 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:4  
 L:219 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4  
 L:357 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:7  
 L:357 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7  
 L:359 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:7  
 L:359 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7  
 L:1485 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26

OIPE

## RAW SEQUENCE LISTING

DATE: 09/07/2001

PATENT APPLICATION: US/09/934,900

TIME: 16:33:18

run

Input Set : A:\BB1476 US NA Seq Listing.txt

Output Set: N:\CRF3\09072001\I934900.raw

Does Not Comply  
Corrected Diskette Needed

3 <110> APPLICANT: Booth, Russ  
 4 Cahoon, Rebecca E  
 5 Hitz, William D  
 6 Kinney, Anthony  
 7 Yadav, Naren  
 9 <120> TITLE OF INVENTION: Nucleotide Sequences of a New Class of Diverged Delta-9 Stearoyl-  
 10 ACP Desaturase  
 12 <130> FILE REFERENCE: BB1476 US NA  
 C--> 14 <140> CURRENT APPLICATION NUMBER: US/09/934,900  
 C--> 15 <141> CURRENT FILING DATE: 2001-08-22  
 17 <150> PRIOR APPLICATION NUMBER: 60/226996  
 18 <151> PRIOR FILING DATE: 2000-08-22  
 20 <160> NUMBER OF SEQ ID NOS: 26  
 22 <170> SOFTWARE: Microsoft Office 97

## ERRORED SEQUENCES

1401 <210> SEQ ID NO: 26  
 1402 <211> LENGTH: 6611  
 1403 <212> TYPE: DNA  
 1404 <213> ORGANISM: Plasmid pBS68  
 1406 <220> FEATURE:  
 1407 <221> NAME/KEY: Unsure  
 1408 <222> LOCATION: (4436)..(4436)  
 1409 <223> OTHER INFORMATION: n = A, C, G, or T  
 1411 <400> SEQUENCE: 26  
 1412 cgcgccctatg cgggaccatc gcagcggacg agaagcggca cgagaacgag tactcaagaa 60  
 1413 tcgtggagaa gcttctggaa gtggacccca ccggggcaat ggtggccata gggaacatga 120  
 1414 tggagaagaa gatcacgatg ccggcgcacc ttatgtacga tggggatgac ccaggctat 180  
 1415 tcgagcacta ctccgctgtg gcgcagcgca taggcgtgta caccgccaac gactacgcag 240  
 1416 acatcttgga tttctcgttg acggtgaaga ttggagaagc ttgaaggatt gatgcctgag 300  
 1417 gggaagcggg ccccaggatt tccgtgtgtg ggttgcccc gaggattagg aggttccaag 360  
 1418 aacgcgctga tgagcgcgag cgtaagatga agaagcatca tgccgttaag ttcagttgga 420  
 1419 ttttcaataa agaattgctt ttgtgagcgg ccgccgactc gacgatgagc gagatgacca 480  
 1420 gctccggccg ccgactcgac gatgagcgcg atgaccagct ccggccgcga cacaagtgtg 540  
 1421 agagtactaa ataaatgctt tggttgtacg aaatcattac actaaataaa ataataaaag 600  
 1422 cttatatatg ccttccgcta aggcggaatg caaagaaatt ggttctttct cgttatcttt 660  
 1423 tgccactttt actagtagct attaatctt acttaatcat ctttgtttac ggctcattat 720  
 1424 atccgtcgac ggcgcgccc atcatccgga tatagttcct ctttcagca aaaaaccct 780  
 1425 caagaccgct ttagaggccc caaggggtta tgctagttat tgctcagcgg tggcagcagc 840  
 1426 caactcagct tcctttcggg ctttgttagc agccggatcg atccaagctg tacctcacta 900  
 1427 ttccctttgcc ctoggacgag tgctggggcg tcggtttcca ctatcggcga gtacttctac 960  
 1428 acagccatcg gtccagacgg ccgcgcttct gcgggcgatt tgtgtacgcc cgacagtccc 1020  
 1429 ggctccggat cggacgattg cgtcgcacgc accctgcgcc caagctgcat catcgaaatt 1080  
 1430 gccgtcaacc aagctctgat agagttggtc aagaccaatg cggagcatat acgcccggag 1140  
 1431 ccgcggcgat cctgcaagct ccggatgcct ccgctcgaag tagcgcgtct gctgctccat 1200



## RAW SEQUENCE LISTING

DATE: 09/07/2001

PATENT APPLICATION: US/09/934,900

TIME: 16:33:18

Input Set : A:\BB1476 US NA Seq Listing.txt

Output Set: N:\CRF3\09072001\I934900.raw

1432	acaagccaac	cacggcctcc	agaagaagat	gttggcgacc	tcgtattggg	aatccccgaa	1260
1433	catcgccctcg	ctccagtcac	tgaccgctgt	tatgcggcca	ttgtccgtca	ggacattggt	1320
1434	ggagccgaaa	tccgcgtgca	cgagggtgcg	gacttcgggg	cagtcctcgg	cccaaagcat	1380
1435	cagctcatcg	agagcctgcg	cgacggacgc	actgacggtg	tcgtccatca	cagtttgcca	1440
1436	gtgatacaca	tggggatcag	caatcgcgca	tatgaaatca	cgccatgtag	tgtattgacc	1500
1437	gattccttgc	ggtccgaatg	ggccgaaccc	gctcgtctgg	ctaagatcgg	ccgcagcgat	1560
1438	cgcattccata	gcctccgcga	ccggctgcag	aacagcgggc	agttcggttt	caggcaggtc	1620
1439	ttgcaacgtg	acacctgtg	cacggcggga	gatgcaatag	gtcaggctct	cgctgaattc	1680
1440	cccaatgtca	agcacttccg	gaatcgggag	cgcggccgat	gcaaagtgcc	gataaacata	1740
1441	acgatctttg	tagaaaccat	cggcgcagct	atttaccgcg	aggacatatc	cacgccctcc	1800
1442	tacatcgaag	ctgaaagcac	gagattcttc	gccctccgag	agctgcatca	ggtcggagac	1860
1443	gctgtcgaac	ttttcgatca	gaaactttct	gacagacgtc	gcggtgagtt	caggcttttc	1920
1444	catgggtata	tctccttctt	aaagttaaac	aaaattattt	ctagagggaa	accgttggtg	1980
1445	tctccctata	gtgagtcgta	ttaatttcgc	gggatcgaga	tctgatcaac	ctgcattaat	2040
1446	gaatcgccca	acgcgcgggg	agaggcgggt	tgcgtattgg	gcgctcttcc	gcttccctcg	2100
1447	tcaactgactc	gctgcgctcg	gtcgttcggc	tgcggcgagc	ggtatcagct	caactcaaagg	2160
1448	cggtaatacg	gttatccaca	gaatcagggg	ataacgcagg	aaagaacatg	tgagcaaaag	2220
1449	gccagcaaaa	ggccagggaac	cgtaaaaaag	ccgcgttgct	ggcgtttttc	cataggctcc	2280
1450	gccccctga	cgagcatcac	aaaaatcgac	gctcaagtca	gaggtggcga	aaccgcagac	2340
1451	gactataaag	ataccaggcg	tttccccctg	gaagctccct	cgtgcgctct	cctgttccga	2400
1452	ccctgccgct	taccggatac	ctgtccgcct	ttctcccttc	gggaagcgtg	gcgctttctc	2460
1453	aatgctcacg	ctgtaggtat	ctcagttcgg	tgtaggtcgt	tcgctccaag	ctgggctgtg	2520
1454	tgcacgaacc	ccccgttcag	cccgaccgct	gcgccttctc	cggtaactat	cgtcttgagt	2580
1455	ccaacccggt	aagacacgac	ttatcgccac	tggcagcagc	caactggtaac	aggattagca	2640
1456	gagcgaggta	tgtaggcggt	gctacagagt	tcttgaagtg	gtggcctaac	tacggctaca	2700
1457	ctagaaggac	agtatttggg	atctgcgctc	tgcgtgaagc	agttaccttc	ggaaaaagag	2760
1458	ttggtagctc	ttgatccggc	aaacaaacca	ccgctggtag	cgggtggttt	tttgtttgca	2820
1459	agcagcagat	tacgcgcaga	aaaaaaggat	ctcaagaaga	tcctttgatc	ttttctacgg	2880
1460	ggtctgacgc	tcagtggaac	gaaaactcac	gttaagggat	tttggtcagt	acattaacct	2940
1461	ataaaaaatag	gcgtatcacg	aggccctttc	gtctcgcgcg	tttcggtgat	gacggtgaaa	3000
1462	acctctgaca	catgcagctc	ccggagacgg	tcacagcttg	tctgtaagcg	gatgccggga	3060
1463	gcagacaagc	ccgtcagggc	gcgtcagcgg	gtgttggcgg	gtgtcggggc	tggtcttaact	3120
1464	atgcggcatc	agagcagatt	gtactgagag	tgcaccatat	ggacatattg	tcgttagaac	3180
1465	gcggctacaa	ttaatacata	accttatgta	tcatacacat	acgatttagg	tgacactata	3240
1466	gaacggcgcg	ccaagcttgg	atcctcgaag	agaagggtta	ataacacatt	ttttaacatt	3300
1467	tttaacacaa	atttttagtta	tttaaaaatt	tattaaaaaa	tttaaaataa	gaagaggaa	3360
1468	tcttttaata	aatctaactt	acaaaattta	tgatttttta	taagttttca	ccaataaaaa	3420
1469	atgtcataaa	aatatgttaa	aaagtatat	atcaatatct	tctttatgat	aaataaaaa	3480
1470	aaaaaaaaaa	taaaagttaa	gtgaaaatga	gattgaagtg	acttttaggtg	tgtataaata	3540
1471	tatcaacccc	gccaacaatt	tatttaattc	aaatatattg	aagtatatta	ttccatagcc	3600
1472	tttatattt	tatatattta	ttatataaaa	gctttatttg	ttctaggttg	ttcatgaaat	3660
1473	atttttttgg	ttttatctcc	gttgtaagaa	aatcatgtgc	tttgtgtcgc	caactcaact	3720
1474	tgcagctttt	tcattgcattg	gtcagattga	cggttgattg	tatttttgggt	ttttatgggt	3780
1475	ttgtgttatg	acttaagtct	tcattctctt	atctcttcat	caggtttgat	ggttacctaa	3840
1476	tatggtccat	gggtacatgc	atggttaaat	taggtggcca	actttgttgt	gaacgataga	3900
1477	atttttttta	tattaagtaa	actattttta	tattatgaaa	taataataaa	aaaaatattt	3960
1478	tatcattatt	aacaaaatca	tattagttaa	tttgtttaact	ctataataaa	agaaatactg	4020
1479	taacattcac	attacatggg	aacatctttc	caccctttca	tttgtttttt	gtttgatgac	4080
1480	tttttttctt	gttttaaattt	atttcccttc	ttttaaattt	ggaatacatt	atcatcatat	4140

## RAW SEQUENCE LISTING

DATE: 09/07/2001

PATENT APPLICATION: US/09/934,900

TIME: 16:33:18

Input Set : A:\BB1476 US NA Seq Listing.txt

Output Set: N:\CRF3\09072001\I934900.raw

1481 ataaactaaa atactaaaaa caggattaca caaatgataa ataataacac aaatattttat 4200  
 1482 aaatctagct gcaatatatt taaactagct atatcgatat tgtaaaataa aactagctgc 4260  
 1483 attgatactg ataaaaaaat atcatgtgct ttctggactg atgatgcagt atacttttga 4320  
 1484 cattgccttt attttattttt tcagaaaagc tttcttagtt ctgggttctt cattatttgt 4380  
 W--> 1485 ttcccatctc cattgtgaat tgaatcattt gcttcgtgtc acaaatacaa tttagnTAGG 4440  
 1486 tacatgcatt ggtcagattc acggtttatt atgtcatgac ttaagttcat ggtagtAcAt 4500  
 1487 tacctgccac gcatgcatta tattggttag atttgatagg caaatttggg tgtcaacaat 4560  
 1488 ataaatataa ataattgtttt tatattacga aataacagtg atcaaaacaa acagttttat 4620  
 1489 ctttattaac aagattttgt ttttgtttga tgacgttttt taatgtttac gctttccccc 4680  
 1490 ttcttttgaa tttagaacac tttatcatca taaaatcaaa tactaaaaaa attacatatt 4740  
 1491 tcataaataa taacacaaat atttttaaaa aatctgaaat aataatgaac aatattacat 4800  
 1492 attatcacga aaattcatta ataaaaatat tatataaata aaatgtaata gtagttatat 4860  
 1493 gtaggaaaaa agtactgcac gcataatata tacaaaaaga ttaaaatgaa ctattataaa 4920  
 1494 taataacact aaattaatgg tgaatcatat caaaataatg aaaaagttaa taaaatttgt 4980  
 1495 aattaacttc tatatgtatt acacacacaa ataataaata atagtaaaaa aaattatgat 5040  
 1496 aaatatattac catctcataa gatattttaa ataatgataa aaatatagat tattttttat 5100  
 1497 gcaactagct agccaaaaag agaacacggg tatatataaa aagagtacct ttaaattcta 5160  
 1498 ctgtacttcc tttattcctg acgtttttat atcaagtgga catacgtgaa gattttaatt 5220  
 1499 atcagctcaa atatttcatt agcacttaat acttttctgt tttattccta tcctataagt 5280  
 1500 agtcccgtatt ctcccaacat tgcttattca cacaactaac taagaaagtc ttccatagcc 5340  
 1501 ccccaagcgg ccggagctgg tcatctcgct catcgtcgag tcggcgcccg gagctggtca 5400  
 1502 tctcgctcat cgtcgagtcg gcggccgctg agtgattgct cacgagtgtg gtcaccatgc 5460  
 1503 cttcagcaag taccaatggg ttgatgatgt tgtgggtttg acccttccact caacactttt 5520  
 1504 agtcccttat ttctcatgga aaataagcca tcgccgccat cactccaaca caggttccct 5580  
 1505 tgaccgtgat gaagtgtttg tcccaaaacc aaaatccaaa gttgcatggt tttccaagta 5640  
 1506 cttaaacaac cctctaggaa gggctgtttc tcttctcgtc acactcaca taggggtggc 5700  
 1507 tatgtattta gccttcaatg tctctggtag accctatgat agttttgcaa gccactacca 5760  
 1508 cccttatgct cccatatatt ctaaccgtga gaggttctg atctatgtct ctgatgttgc 5820  
 1509 tttgttttct gtgacttact ctctctaccg tgttgcaacc ctgaaaggtt tggtttggt 5880  
 1510 gctatgtgtt tatggggtgc ctttgtctcat tgtgaacggt tttcttgtga ctatcacata 5940  
 1511 tttgcagcac acacactttg cettgcctca ttacgattca tcagaatggg actggctgaa 6000  
 1512 gggagctttg gcaactatgg acagagatta agcggccgca tgccctccaga aaagaaagaa 6060  
 1513 attttcaagt cettggaggg atgggcctcg gagtgggtcc taccgtgct gaagcccggt 6120  
 1514 gagcaatgct ggcagccaca aaacttctc cctgaccct cccttccgca tgaagagttc 6180  
 1515 agccatcagg tgaaggagct tcgcgaacgc actaaagagt tacctgatga gtactttgtg 6240  
 1516 gtgctggtgg gtgatattgg caccgaggac gcgcttccca cttaccagac catgatcaac 6300  
 1517 aaccttgatg gagtgaagaa tgacagcggc acgagcccga gcccggtggc cgtgtggacc 6360  
 1518 cgggcctgga ccgcccagga aaacagacac ggggatctgc tcagaactta tttgtatctc 6420  
 1519 tctgggaggg ttgacatggc taaggtcgaa aagaccgtac attacctcat ttcagctggc 6480  
 1520 atggaccctg ggacagacaa caaccatat ttggggtttg tgtacacgtc attccaagag 6540  
 1521 cgagcaacat ttgtggcgca cgggaacacg gctcggctcg cgaaggaggg cggggatcca 6600  
 1522 gtgctggcgc g  
 E--> 1523 ①

Delite

## VERIFICATION SUMMARY

DATE: 09/07/2001

PATENT APPLICATION: US/09/934,900

TIME: 16:33:19

Input Set : A:\BB1476 US NA Seq Listing.txt

Output Set: N:\CRF3\09072001\I934900.raw

L:14 M:270 C: Current Application Number differs, Replaced Application Number  
L:15 M:271 C: Current Filing Date differs, Replaced Current Filing Date  
L:190 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:3  
L:190 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3  
L:192 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:3  
L:192 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3  
L:193 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:3  
L:193 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3  
L:194 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:3  
L:194 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3  
L:219 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:4  
L:219 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4  
L:357 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:7  
L:357 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7  
L:359 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:7  
L:359 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7  
L:1485 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26  
L:1523 M:254 E: No. of Bases conflict, LENGTH:Input:1 Counted:6611 SEQ:26